

**REMARKS**

Claims 6, 7, and 9-11 are pending in this application. By this Amendment, claim 2 is canceled without prejudice to or disclaimer of the subject matter contained therein; claim 9 is amended for antecedent bases; and claim 10 is amended only for clarity and form. No new matter is added. Reconsideration of the application is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution); (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. Entry of the amendments is thus respectfully requested.

The courtesies extended to Applicants' representative by Examiner Slifka at the interview held August 12, 2011, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

The Office Action rejects claims 2, 6, 7, and 9-11 under 35 U.S.C. § 103(a) as allegedly unpatentable over Sugiura (U.S. Patent Application Publication No. 2002/0038732) in view of Peng (U.S. Patent No. 7,130,205) and Tsuchiya (Japanese Patent Application Publication No. 2003-235252). Applicants respectfully traverse the rejection.

Applicants respectfully submit that the applied references fail to disclose and would not have rendered obvious, at least, a hybrid fuel cell (1) wherein the controller is configured to switch the operation to the single phase drive mode during the multiple phase drive mode when the equivalent value becomes smaller than a first value, wherein the controller is configured to switch the operation to the multiple phase drive mode during the single phase

drive mode when the equivalent value is larger than a second value that is larger than the first value, and (2) wherein the first and second values are both set less than a threshold value at which a total loss of the voltage converter for the single phase drive mode surpasses a total loss of the voltage converter for the multiple phase drive mode, as recited by independent claim 10, and similarly by independent claim 6.

Regarding feature (1), the Office Action relies on paragraph [0027] of Tsuchiya as allegedly disclosing the features as claimed. Paragraph [0027] of Tsuchiya indicates that when  $N = 1$ , only master DC-DC converter 31 is driven, when  $N = 2$ , master DC converter 31 and slave DC converter 32 are driven and when  $N = 3$ , master DC converter 31 and slave DC-DC converters 32 and 33 are driven. Examiner Slifka clarified during the personal interview, that under his interpretation of Tsuchiya,  $N=1$  corresponds to the claimed first value.

However, as discussed in the personal interview, the claimed subject matter recites *inter alia* "when the equivalent value becomes smaller than a first value." Tsuchiya only discusses the case where  $N=1$  and does contain any detail with respect to any switching that takes place when  $N$  is smaller than 1. The disclosure of an occurrence at a specific value does not correspond to or render obvious switching when an equivalent value becomes smaller than a first value.

As also discussed at the personal interview, if  $N=2$  is interpreted as corresponding to the first value, Tsuchiya also fails to disclose the above features. Applicants note that this is the only interpretation where Tsuchiya discloses switching when  $N$  value becomes smaller than a first value ( $N=2$ ), i.e., when  $N=1$ , which is less than  $N=2$ , only the master DC-DC converter 31 of Tsuchiya is driven. However, the claimed subject matter also recites *inter alia* "wherein the controller is configured to switch the operation to the multiple phase drive mode during the single phase drive mode when the equivalent value is larger than a second value that is larger than the first value."

First, the claimed subject matter requires a second value that is larger than the first value. The only value within Tsuchiya that is larger than  $N=2$  (alleged first value) is  $N=3$ . The claimed switch to the multiple phase drive mode occurs when the equivalent value is larger than the second value. However, Tsuchiya, at paragraph [0025], explicitly describes that the maximum value of  $N$  is 3. Tsuchiya cannot disclose or render obvious the claimed subject matter as it will not allow a value of  $N$  to be larger than 3.

Second, the switch to the multiple phase drive mode occurs during the single phase drive mode. As is clear from Tsuchiya, when  $N = 2$ , master DC converter 31 and slave DC converter 32 are driven. When the device of Tsuchiya reaches  $N=3$  (alleged second value) it is already operating in a multiple phase mode and thus cannot disclose or render obvious switching the operation to the multiple phase drive mode during the single phase drive mode when the equivalent value is larger than a second value that is larger than the first value.

Regarding feature (2), the Office Action relies on routine experimentation as allegedly rendering these features obvious, however, as discussed during the personal interview, MPEP §2144.05 requires that in order for a particular value to be obvious through routine experimentation, it must first be recognized as a result effective variable, i.e., a variable which achieves a recognized result. The Office Action fails to establish where within the prior art it has been recognized that the claimed threshold is a result effective variable such that it could be optimized by routine experimentation to render obvious these features.

The Office Action merely states that it would have been well within the purview of one skilled in the art at the time of invention to determine the claimed threshold through routine experimentation. The Office Action provides no guidance as to how one skilled in the art would be motivated to perform such experimentation given the fact that the applied references clearly fail to disclose such a threshold. Because the Office Action fails to establish that the claimed threshold is obvious in view of the applied references, the Office

Action also fails to establish that the setting of the claimed first and second values with respect to the claimed threshold value is obvious in view of the applied references.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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